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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/583,240

06/16/2006

Hideaki Maruta

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EXAMINER

TRAN, TRANG Q

ART UNIT

PAPER NUMBER

2811

NOTIFICATION DATE

DELIVERY MODE

08/19/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/583,240	Applicant(s) MARUTA, HIDEAKI	
	Examiner TRANQ Q. TRAN	Art Unit 2811	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,6,7,10,11,13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6,7,10,11 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/16/06, 10/16/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Embodiment of Fig. 7 (claims 3, 6-7, 10-11 and 13) in the reply filed on 07/17/2009 is acknowledged.

Claims 1-2, 4-5, 8-9, and 12 are cancel from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 07/17/2009.

Applicant identified claim 14 is related to species II. The Examiner observed elected claim 14 was found not drawn to species II, because claim 14 claimed the limitation of "one of interior angles made by side faces where the active layer is uncovered and an uncovered upper face at a side of the second semiconductor layer is 138 degrees or more" which is directed to Embodiment of Fig. 14. Therefore, claim 14 is withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3, 6-7, 10-11 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 3: the recited limitations of “the second semiconductor layers and the active layers” are unclear as to which second semiconductor layers and active layers applicant refer.

The recited limitation of “further the second semiconductor layers and the active layers are spatially separated between the mesa portions” is unclear. How can the second semiconductor layers and the active layers are spatially separated between the mesa portions?

Claim 3 is failing to particularly point out and distinctly define the metes and bounds of the subject matter because it is unclear what is the preamble of the claim.

Claim 10: the recited limitation of “a face of the substrate opposite to a face of the substrate where the first semiconductor layer is formed has a reflecting layer” is unclear. How can a face of the substrate opposite to a face of the substrate where the first semiconductor layer is formed has a reflecting layer?

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 3 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Uemura et al. (US 2001/0028062).

Re. claim 3, Figs. 1-3 of Uemura disclose a semiconductor light emitting device, comprising a substrate (11); and at least two or more mesa portions (as seen in Fig. 3) in each of which a first semiconductor layer (14), an active layer (15) and a second semiconductor layer (16) that are sequentially provided on the substrate (11),

wherein the second semiconductor layers (16) have a polarity different from that of the first semiconductor layers (14, as seen in ¶¶83-84) and further the second semiconductor layers and the active layers are spatially separated between the mesa portions (as seen in Fig. 3).

Re. claim 11, Uemura discloses the semiconductor light emitting device according to claim 3, which is a group III Nitride Compound Semiconductor light emitting device represented by GaN wherein (¶¶81-83).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-7, 10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uemura.

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Re. claim 6, Uemura discloses the semiconductor light emitting device according to claim 3, Uemura further teaches the first semiconductor layer, the active layer and the second semiconductor layer have a certain measurements such as thickness. However, Uemura may not teach a total area of the first semiconductor layer, the active layer and the second semiconductor layer in side faces where the active layer is uncovered is 5% or more of an area of an uncovered upper face at a side of the second semiconductor layer.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the claims total area, in order to optimize the performance of the device. Since, such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. See of the following: *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984).

Re. claim 7, Uemura discloses the semiconductor light emitting device according to claim 3, Uemura may not teach wherein a shortest distance from all points contained in the active layer to side faces where the active layer is uncovered is 40 micrometer or less.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a claimed distance, in order to optimize the performance

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of the device. Furthermore, it has been held that discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233; *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980); *In re Huang*, 100 F.3d 135, 40 USPQ2d 1685, 1688 (Fed. Cir. 1996).

Re. claim 10, Uemura discloses the semiconductor light emitting device according to claim 3, wherein a face of the substrate opposite to a face of the substrate where the first semiconductor layer is formed has a reflecting layer (as seen in Fig. 3 and ¶85).

Re. claim 13, Uemura discloses the semiconductor light emitting device according to claim 3, Uemura may not teach wherein a shape of an uncovered upper face at a side of the second semiconductor layer has an apex having an angle of less than 45 degrees.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide the shape of an uncovered upper face at a side of the second semiconductor layer has an apex having an angle of less than 45 degrees in Uemura, order to achieve the device properties.

Furthermore, the change in shape of the claimed shape was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the uncovered upper face at a side of the

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second semiconductor layer was significant. See *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TRANG Q. TRAN whose telephone number is (571)270-3259. The examiner can normally be reached on Mon - Thu (9am-5pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne A. Gurley can be reached on 571-272-1670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. Q. T./
Examiner, Art Unit 2811
/Cuong Q Nguyen/

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Primary Examiner, Art Unit 2811